BACKGROUND: Utilization of In Vitro Fertilization (IVF) to treat infertility is increasing, despite the high cost incurred, often resulting in multiple births with poor outcomes. Physicians practicing in states with insurance mandates have been shown to transfer fewer embryos, resulting in fewer multiple births and improved outcomes. **OBJECTIVES:** The objective of this study was to compare the impact of mandated IVF insurance coverage on the cost per live birth of healthy infants and infants born with disability. **METHODS:** A Markov model was developed to calculate the number of live births resulting from a maximum of six IVF cycles, and cumulative costs through initial hospital discharge. Age-specific utilization rates, pregnancy rates, birth rates, multiple rates, and costs for states with and without insurance mandates were derived from the literature, insurances claims databases, and publicly available CDC data. The model takes a societal perspective and reports results in 2010 US dollars. **RESULTS:** In hypothetical cohorts of 10,000, for women under the age of 35-years, the insurance strategy results in 42 fewer births with disability. The non-insurance strategy results in 31 additional healthy births but at a cost of $1,831,462 per healthy birth. For women aged 35-37, the insurance strategy dominates the non-insurance strategy with 12 additional births with disability, and 282 additional healthy births. For women aged 38-40, the insurance strategy dominates the non-insurance strategy with 0 additional births with disability, and 46 additional healthy births. For women aged 41-42, the insurance strategy results in 23 fewer births with disability, and 1 fewer healthy birth. The cost for each additional healthy birth is $244,903,064. **CONCLUSIONS:** This study shows insurance coverage for IVF is a "cost-effective", and in some age groups a dominant strategy, even in the short time horizon from delivery through initial discharge and should be considered for inclusion as a standard insurance benefit.

PIH20

COST MINIMIZATION ANALYSIS OF THE DIENOGEST USE IN PATIENTS WITH ENDOMETRIS IN COLOMBIA AND ARGENTINA

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OBJECTIVES: This study provides the results from a minimization costs model that compares the use of Dienogest with the use of GnRH antagonist in women with Endometriosis diagnosis in Colombia and Argentina. **METHODS:** We used a cost minimization model. The case base are women with endometriosis diagnosis in a 1 year time horizon. For the Colombian analysis we used a public perspective while in Argentina we used a social work perspective and a prepaid medical services perspective. The costs used in this model are direct costs and were obtained from some insurers of Colombian and Argentinean health system. The colombian treatment schedule is: 12-month use of Dienogest vs. 6-month use of the GnRH antagonist, and the Argentina treatment schedule is: 12-month use of Dienogest vs 6-month use of GnRH antagonist + 6-month use of supportive treatment (treatment schedule 1), or 12-month use of Dienogest vs 9-month use of GnRH antagonist + 9-month use of add-back treatment + 3-month use of supportive treatment (treatment schedule 2). **RESULTS:** For the case base studied, we found that in Colombia the total treatment cost is US$986.19 with Dienogest and US$2855.57 with the GnRH antagonist. In the other hand in Argentina. The total treatment cost for the treatment schedule 1 is US$534.57 with Dienogest and US$881 with the GnRH antagonist from the social work perspective, and $490.75 with Dienogest and 812.21 the GnRH antagonist from the prepaid medical services perspective. The total treatment cost for the treatment schedule 2 is US$534.57 with Dienogest and US$1488.28 with the GnRH antagonist from the social work perspective, and $490.75 with Dienogest and US$1386.21 the GnRH antagonist from the prepaid medical services perspective. **CONCLUSIONS:** The use of Dienogest minimizes the total cost either in Colombia and Argentina from any perspective.

PIH21

COST IMPACT ANALYSIS OF AN END-OF-LIFE CARE PROGRAM FOR NURSING HOME RESIDENTS: THE PRELIMINARY RESULTS FROM PROJECT CARE

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OBJECTIVES: In Singapore, the default option for medical care among nursing home (NH) residents at their end of life is hospital admission, incurring high healthcare costs. Palliative care has been shown to reduce healthcare costs at the end-of-life; however, NHs are not equipped to offer this. Project CARE was introduced in 7 NHs by a hospital unit to provide palliative care for NH residents. Our objective is to evaluate the cost impact of Project CARE on NH residents at the end-of-life. **METHODS:** Project CARE was provided to a prospective cohort identified with a risk of dying within the next 1-year. A retrospective control group deceased within 2-years prior to the inception of Project CARE was identified. Comparisons between Project CARE and routine care were made for the following time points: 1- and 3-months prior to death. We adopted the health system perspective, including the cost incurred for palliative care visits, hospitalization length of stay (LOS), nursing home LOS, emergency visits, specialist visits and primary care visits. Differences in cost at 1- and 3-months prior to death were analyzed using linear regression of log transformed cost adjusting for patient characteristics. **RESULTS:** A total of 429 residents (cases: 96, controls: 333) were included for the study. Mean age of cases and controls were 85 and 82 years respectively. At 3 months prior to death, Project CARE cost 2.5% (95% CI: -18.2%, 23.1%) more than the routine care. A 20% (95% CI: -42%, 1.8%) savings was observed at 1 month prior to death. However, both observations were not statistically significant. **CONCLUSIONS:** Costs were not significantly different between Project CARE and routine care. High start-up cost of the program might have offset savings from reduction in hospitalization. We postulate potential cost savings as the program reaches full capacity.

PIH22

QUALITY OF PEDIATRIC COST-UTILITY ANALYSES 1997-2009

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OBJECTIVES: High quality economic evidence is necessary for optimizing pediatric health care allocation. The objectives were to appraise the quality of published pediatric cost utility analyses (CUA). It was hypothesized that higher quality would be associated with later publications, publication in a health economics/methods journal and prospective utility assessment. **METHODS:** Pediatric CUAs published in 1997-2009 were assessed. Studies were retrieved from the Pediatric Economic Database Evaluation project (PEDE), a comprehensive database of pediatric health economic evaluations. Quality was assessed using the Pediatric Quality Appraisal Questionnaire which scores 14 domains from 0 to 1. Higher domain scores indicate better quality. Multiple linear regression was used to examine the effect of journal type, whether utility was measured prospectively in the study, and year of publication on each domain score. **RESULTS:** There were 305 CUAs published over the study interval. The annual number of pediatric CUAs increased over time. Most studies were undertaken in North America and Europe. Infectious diseases and their treatment and prevention was the most common therapeutic area (48%). Young children (1 to 12 years old) were studied most often (39%). Utility was measured prospectively in only 8% of studies. Quality was appraised in a random sample of 213 CUAs. Mean domain scores ranged from 0.57 (Analysis) to a high of 0.91 (Target population). Studies published in methods/economics journals demonstrated significantly higher scores for 7 domains ($p<0.05$). Studies that measured utility prospectively scored significantly higher on the Analysis domain. Multiple regression results showed that quality of five domains improved over time ($p<0.05$). **CONCLUSIONS:** While quality in some domains improved over time, others did not. Variability in quality of pediatric CUAs indicates that caution should be exercised when interpreting results for decision making. Challenges in conducting economic evaluations in children, such as prospective utility measurement, require further research.

PIH23

ECONOMIC IMPACT OF BREAST PAIN AND BLEEDING AMONG WOMEN PRESCRIBED ESTROGEN PLUS PROGESTOGEN HORMONE THERAPY

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OBJECTIVES: To examine in a retrospective study the incremental health care costs of breast pain and endometrial bleeding among postmenopausal women prescribed progestin containing Hormone Therapy (HT). **METHODS:** Women age 45 to 65 who were prescribed HT (01/01/2006-09/30/2008) were selected from a large US claims database. The date of the first identified HT prescription was assigned as the index date. Patients were required to have at least 1 quarter of continuous medical and pharmacy benefits before and after the index date. Patients evidencing breast pain and/or endometrial bleeding during the follow-up period were assigned to the 'selected AEs' cohort, and the remaining patients were assigned to the 'no selected AEs' cohort. Patients were followed for at most 8 full quarters. A two-part model using logistic regression and a mixed model with repeated measurements were used in the multivariate analysis. Patients' age, medication, procedures, and health care costs during the pre-index period were adjusted in the model. Adjusted total health care costs for each quarter, 1st and 2nd years of the follow-up period, and average annual costs were provided. **RESULTS:** A total of 5,325 patients were included in the 'selected AEs' cohort and 49,942 in the 'no selected AEs' cohort. After adjusting for baseline differences, the adjusted quarterly costs ranged from $1944 to $2185 for the 'selected AEs' cohort and from $1699 to $1971 for the 'no selected AEs' cohort. The quarterly health care cost differences between the two cohorts were from $250 ($p<0.0001$) at first quarter to $214 ($p<0.0001$) at 8th quarter. The adjusted annual health care costs were higher for patients with the selected AEs ($8195 vs. $7238; $p<0.0001$). **CONCLUSIONS:** This study shows that the incremental total health care costs associated with endometrial bleeding and breast pain are on average $239 quarterly and $957 annually, in a US managed care setting.

PIH24

MODELING THE HEALTH AND MEDICAL CARE SPENDING OF THE FUTURE ELDERLY: AN UPDATE USING THE FUTURE ELDERLY MODEL

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OBJECTIVES: Developed over the past 15 years, the Future Elderly Model (FEM) is a demographic and economic model to predict future costs and health status for the elderly. The present study updates the model by incorporating health behaviors, which can have significant impacts on the use and value of new health care technologies. In addition, it extends the FEM to new disease areas, including: cognitive impairment and Alzheimer's; aging-related interventions; diabetes; socioeconomic disparities; the health consequences of reimbursement for medical innovations; and the productivity benefits of improved health in older populations. **METHODS:** The FEM uses a representative sample of Americans aged 51+, from the Health and Retirement Study (HRS). Based on the observed risks and transitions in the HRS, the FEM models how individuals grow old, acquire diseases and disabilities, and die. The FEM is coupled with expert panels and reviews of the literature designed to elicit the most likely scenarios for new technological changes.